



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/800,930 | 03/08/2001 | Tsuyoshi Watanabe | 2185-0519P | 5637 |

2292 7590 03/25/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

HARLAN, ROBERT D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1713

DATE MAILED: 03/25/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,930

Applicant(s)

WATANABE, TSUYOSHI

Examiner

Robert D. Harlan

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --

Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1713

DETAILED ACTION

1. The Amendment and Petition for Time Extension filed by Applicant on 12/18/02 has been entered.

2. Claim 4 has been canceled.

Response to Amendment/Arguments

3. Applicant's amendment and arguments filed on 12/18/02 have been fully considered and they are found unpersuasive.

4. The rejection of claim 1 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

Art Unit: 1713

art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-3 and 5-9 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al., U.S. Patent No. 6,121,401 (hereinafter "Yamamoto") in view of Lee et al., *Preparation of $Al(C_6F_5)_3$ and its use for the modification of methylalumoxane*, Journal of Molecular Catalysis A: Chemical 132 (1998) 231-239 (hereinafter "Lee"). Yamamoto teaches a polymerization catalyst comprising: (A) a transition metal complex substantially identical to the complex found in present claim 8; (B) an aluminum compound; and (C) a boron compound. See Yamamoto, col. 2, line 17 through col. 3, line 43. Although Yamamoto teaches the mixing of compounds (B) and (C), Yamamoto

Art Unit: 1713

differs from the present invention in that Yamamoto does not directly teach the modified aluminosy compound of the present invention. Lee teaches, in analogous art, the use of modified methylalumoxane in olefin polymerizations.

8. The basic requirements of prima facie case of obvious are: (1) there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP 2143. "There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Although Yamamoto does not disclose in the working examples the modified aluminosy compound of the present invention, based on the specification as a whole a polymer chemist of ordinary skill in the art would be motivated to modify Yamamoto by preparing a modified aluminosy compound.

Art Unit: 1713

Such modification would be obvious because Yamamoto makes it clear that an aluminoxane may be combined with a boron compound (i.e. tripentafluorophenyl borane) and one would have a reasonable expectation of success that polymerization catalyst as taught by Yamamoto would be similarly useful and applicable to modified methylalumoxane of Lee. In view of Lee, one having an ordinary skill in the art would be motivated to modify Yamamoto by using a modified aluminoxy compound in the preparation the polymerization catalyst. Such modification would be obvious because one would expect that the use of polymerization catalyst as taught by Yamamoto would be similarly useful and applicable to the method of using a modified methylalumoxane as taught in Lee. Therefore, claims 1-3 and 5-9 are deem as being unpatentable over Yamamoto in view of Lee.

9. The Applicants argue Yamamoto is silent about the reaction temperature range between the boron compound and aluminumoxy compound. The Examiner concurs with the Applicants' assertion; however, Lee is not silent about the temperature range (Lee teaches a combination temperature of about 65°C). In addition, the Applicants have not demonstrated unexpected results. To the contrary, the present specification (page 48, line 23) teaches

Art Unit: 1713

that the reaction is temperature is not specifically limited. The Applicants, also argue, the transition metal disclosed in Lee is different from component (A) of amended claim 1. This may be the case, however, Yamamoto teaches the transition metal of amended claim 1. Finally, the Examiner contends, as stated above, that the combination of Yamamoto and Lee provides ample motivation to those of ordinary skill in the art.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

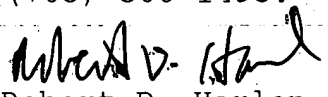
Art Unit: 1713

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (703) 306-5926. The examiner can normally be reached on Mon-Fri, 10 AM - 8 PM.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9559 for regular communications and (703) 872-9559 for After Final communications.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1495.


Robert D. Harlan
Examiner
Art Unit 1713

rdh
February 27, 2003